

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 8-15 are presented for examination. Claim 8 is amended and Claim 15 is added by the present amendment.

In the outstanding Office Action, Claims 8-12 and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over Goesele et al. (U.S. Patent No. 6,150,239, herein "Goesele") in view of Usenko (U.S. Patent No. 6,995,075), and Claim 13 was rejected under 35 U.S.C. § 103(a) as unpatentable over Goesele, Usenko, and Maleville et al. (U.S. Patent No. 6,403,450, herein "Maleville").

Independent Claim 8 has been amended to correct a minor informality and to recite that a determined depth is chosen during ion implantation. The claim amendments find support, for example, in the specification at page 12, lines 3-14. No new matter has been added. Independent Claim 8 has been amended not to overcome the applied art. Thus, the rejections on the merits of the claims are respectfully traversed for the following reasons.

Briefly recapitulating, independent Claim 8 is directed to a method of transferring an electrically active thin film from an initial substrate to a target substrate. The method includes ion implantation through one face of the initial substrate to create a buried film at a determined depth in relation to the implanted face. By ion implantation a thin film is delimited between the implanted face and the buried film. The method further includes fastening the implanted face with a face of the target substrate, separating the thin film from a remainder of the initial substrate at the level of the buried film, and thinning down the thin film transferred on the target substrate. The implantation dosage, energy, current and the determined depth are chosen during the ion implantation so that a concentration of implantation defects is less than a determined threshold, which results, within the thinned

down thin film, in a number of acceptor defects that is compatible with desired electrical properties of the thin film.

Thus, the ion implantation step of Claim 8 produces in the initial substrate the buried film and the thin film. By controlling the implantation dosage, energy, current and the determined depth during the ion implantation, the claimed method advantageously transfers the thin film without damaging its electrical properties, which has been disclosed as being uniquely challenging in the specification at page 2, line 12 to page 5, line 17. In other words, the transfer of the thin film without affecting its electrical properties was difficult for one of ordinary skill in the art, as specifically disclosed in the above noted portion of the specification.

Turning to the applied art, Goesele discloses that a first substrate is implanted with a certain impurity to create a disordered layer with a depth close to an average desired thickness of a thin monocrystalline layer to be transferred, as disclosed at column 4, lines 24-29 in Goesele. Following various other steps, the thin monocrystalline layer is transferred from the first substrate to the second substrate.

However, Goesele does not teach or suggest that a buried film and a thin film are formed in the first substrate as required by independent Claim 8. Goesele discloses the formation of only the thin film and not the buried film.

In addition, as recognized by the outstanding Office Action at page 3, fourth paragraph, Goesele “do not specify wherein the implantation dosage, energy and current are chosen” such that a number of acceptor defects is compatible with desired electrical properties of the thin film. The outstanding Office Action considers that this selection of the dosage, energy and current corresponds with discovering optimum and workable ranges by routine experimentation.

However, as discussed above, selecting those quantities is uniquely challenging or difficult for one of ordinary skill in the art, which does not indicate routine experimentation as suggested by the outstanding Office Action.

The outstanding Office Action relies on Usenko for teaching the step of thinning down a thin film. However, Usenko does not cure the deficiencies of Goesele discussed above with regard to independent Claim 8.

Accordingly, Applicants respectfully submit that Claim 8 patentably distinguishes over the applied art because neither of the references teaches or suggests forming both the buried film and the thin film and transferring only the thin film from a first substrate to a second substrate.

Thus, it is respectfully submitted that independent Claim 8 and each of the claims dependent therefrom patentably distinguish over Goesele and Usenko, either alone or in combination.

New Claim 15 has been added to set forth the invention in a varying scope and the new claim finds support in the specification, for example, at page 11, lines 13-16 and page 12, lines 11-14. No new matter has been added. Accordingly, it is respectfully submitted new Claim 15 is allowable for similar reasons as discussed above.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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